Practice: solving equations with functions

1. If $f[38] = 22$, then there exists a knowable solution to the equation below.

$$y = 5 \cdot f[2x - 28] - 54$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 33$

$y = 56$

2. If $f[98] = 74$, then there exists a knowable solution to the equation below.

$$y = \frac{f[7\,(x - 6)]}{2} - 34$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 20$

$y = 3$

3. If $f[62] = 14$, then there exists a knowable solution to the equation below.

$$y = 9 \cdot f[2\,(x + 5)] - 76$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 26$

$y = 50$

4. If $f[40] = 54$, then there exists a knowable solution to the equation below.

$$y = \frac{f\left[\frac{x}{2} - 4\right]}{9} + 65$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 88$

$y = 71$

5. If $f[33] = 11$, then there exists a knowable solution to the equation below.

$$y = 4 \cdot \left(f\left[\frac{x + 52}{2}\right] + 3 \right)$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 14$

$y = 56$

6. If $f[75] = 72$, then there exists a knowable solution to the equation below.

$$y = \frac{f[3x - 27]}{18} + 22$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 34$

$y = 26$

7. If $f[6] = 56$, then there exists a knowable solution to the equation below.

$$y = \frac{f\left[\frac{x+81}{23}\right]}{4} - 9$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 57$

$y = 5$

8. If $f[90] = 92$, then there exists a knowable solution to the equation below.

$$y = \frac{f[6\,(x+7)] - 14}{26}$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 8$

$y = 3$

9. If $f[25] = 17$, then there exists a knowable solution to the equation below.

$$y = 3 \cdot f[2x + 7] - 5$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 9$

$y = 46$

10. If $f[85] = 48$, then there exists a knowable solution to the equation below.

$$y = \frac{f[39x - 32]}{24} + 68$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 3$

$y = 70$

11. If $f[78] = 72$, then there exists a knowable solution to the equation below.

$$y = \frac{f\left[\frac{x}{8} + 73\right]}{24} + 74$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 40$

$y = 77$

12. If $f[33] = 24$, then there exists a knowable solution to the equation below.

$$y = \frac{f[9x - 75]}{6} + 47$$

Find the solution. (The solution is the ordered pair (x, y) that makes the equation true.)

$x = 12$

$y = 51$